WE CLAIM:

1. A rotating data storage disk comprising:

at least two data storage areas, wherein each area is sized to store a copy of a set of data and the data storage areas are substantially equidistantly spaced from each other.

2. The rotating data storage disk of claim 1 wherein the at least two data storage areas are located at radially opposed locations at a substantially 180 degree angular offset with respect to a spin axis of the rotating data storage disk and mirrored across the spin axis.

3. The rotating data storage disk of claim 1 wherein the at least two data storage areas are substantially equidistantly spaced with respect to a median diameter of the disk.

4. The rotating data storage disk of claim 1 wherein the disk further comprises at least two magnetic recording surfaces, wherein the data storage areas are formed in a single one of the at least two magnetic recording surfaces.

5. The rotating data storage disk of claim 1 wherein the disk further comprises at least two magnetic recording surfaces, wherein the data storage areas are formed in separate ones of the at least two magnetic recording surfaces.

6. The rotating data storage disk of claim 1 wherein the disk further comprises an optical recording surface.

7. The rotating data storage disk of claim 1 wherein the disk further comprises a magneto-optical recording surface.

8. The rotating data storage disk of claim 1 wherein the disk further comprises a plurality of concentric tracks defined on the disk and all of the at least two data storage areas are located on the same track.

9. The rotating data storage disk of claim 1 wherein the disk further comprises a plurality of concentric tracks defined on the disk and all of the at least two data storage areas are located within plus or minus one track of the same track.

10. The rotating data storage disk of claim 1 wherein the at least two data storage areas comprise a number "n" storage areas and the disk exhibits a characteristic virtual revolutions per minute (RPM) that is a multiple n of the actual spin speed of the rotating data storage disk.

11. A disk drive system comprising:

one or more platters, each platter supporting at least one recording surface, wherein the platters are aligned about a common central axis;

means for spinning the platters about the common central axis;

a recording head associated with each recording surface;

an actuator mechanism coupled to each recording head to move the recording head into proximity with selected portions of the recording surface in response to received commands; and

at least two replicates of data stored in at least two data storage areas such that any one of the at least two replicates can be accessed to service a data access request.

12. The disk drive system of claim 11 wherein the data storage areas are located so as to be mirrored about the spin axis of the platters.

13. The disk drive system of claim 11 wherein the at least two data storage areas are substantially equidistantly spaced with respect to a median diameter of the platters.

14. The disk drive system of claim 11 wherein the data storage areas are formed in a single one of the one or more platters.

15. The disk drive system of claim 11 wherein the data storage areas are formed in separate platters of the one or more platters.

16. The disk drive system of claim 11 wherein each recording surface further comprises a plurality of concentric tracks defined on the recording surface and each track is substantially aligned with a corresponding track on an adjacent platter, wherein all of the at least two data storage areas are located on aligned tracks.

17. The disk drive system of claim 11 wherein each recording surface further comprises a plurality of concentric tracks defined on the recording surface and each track is substantially aligned with a corresponding track on an adjacent platter, wherein all of the at least two data storage areas are located on aligned tracks.

18. The disk drive system of claim 11 wherein the at least two data storage areas comprise a number "n" storage areas and the disk exhibits a characteristic virtual revolutions per minute (RPM) that is a multiple n of the actual spin speed of the rotating data storage disk.

19. The disk drive system of claim 11 further comprising:

a command processor having an interface to receive external disk access requests and coupled to provide the commands to the actuator mechanism; and

memory coupled to the command processor and configured to store redundant write access request commands such that the at least two replicates can be stored asynchronously.

20. A method for accessing an integral data storage mechanism comprising:

receiving an access request;

replicating the access request;

executing at least one of the access request and the replicated access request to a disk media within the data storage mechanism.

21. The method of claim 20 wherein the act of receiving an access request comprises receiving a request over a SCSI bus.

22. The method of claim 20 wherein the act of receiving an access request comprises receiving a request over an IDE bus.

23. The method of claim 20 wherein each access request specifies a logical location of a set of data to be accessed and the act of replicating comprises

determining at least two physical locations corresponding to the logical location of the set of data.

24. The method of claim 23 wherein the data storage mechanism comprises one or more disk media and the act of determining at least two physical locations further comprises determining the at least two physical locations that are located at radially opposed locations on the disk media.

25. The method of claim 20 wherein the access request comprises a request to read data and the method further comprises:

selecting either the access request or the replicated access request based upon which provides the least latency; and

executing the selected request.

26. The method of claim 20 wherein the access request comprises a request to write data and the method further comprises:

selecting one of the access request and the replicated access request;

executing the selected request; and

buffering the un-selected request; and

executing the buffered request asynchronously with respect to the selected request.

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27. A disk controller comprising:

a command port for receiving disk access commands;

a command processor for executing software processes;

a first process executing in the command controller for replicating a received disk access request;

a second process executing in the command controller for executing at least one of the received disk access

request and replicated disk access request against a disk drive.

28. The disk controller of claim 27 wherein the first process comprises processes configured to cause the command processor to determine radially opposed locations within the disk suitable for the disk access request.

29. The disk controller of claim 27 wherein the first process comprises processes configured to cause the command processor to determine locations on adjacent tracks within the disk suitable for the disk access request.

30. The disk controller of claim 29 wherein the second process receives the determined radially opposed locations and executes the at least one disk access request at the determined location.

31. The disk controller of claim 27 further comprising a redundant data table holding one or more pending write access requests and coupled to the second process such that the second process can execute the received disk access request and the replicated disk access request asynchronously.